

PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of the existing traffic control signal and street lighting at the intersection of Alt. US 1 and I-695 Ramp "G" in Baltimore County, Maryland. Alt. US 1 is considered to run in a north/south direction.

II. INTERSECTION OPERATION

The intersection presently operates in a NEMA four (4) phase, full-traffic-actuated mode. There is an exclusive/permissive left turn phase for the southbound movement of Alt. US 1 with a right turn overlap for the I-695 Ramp "G" offramp to northbound Alt. US 1 movement. The Alt. US 1 through movements operate concurrently. The I-695 Ramp "G" movement operates alone.

The intersection is to be modified to operate in a NEMA six (6) phase, full-traffic-actuated mode. An exclusive/permissive left turn phase for the northbound Alt. US 1 movement will be added to the intersection. The new business park's entrance and the I-695 Ramp "G" movement will be changed to operate as a side street split operation. All other existing phasing is to be utilized.

The existing cabinet, controller and loop detector amplifiers are to be utilized. Three 2-channel loop detector amplifiers are to be added to the existing cabinet.

EQUIPMENT LIST

A. Approved S.H.A. equipment to be purchased by the Developer and installed by the Contractor. All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
1	EA	818	21 ft. steel mast arm pole with 38 ft. mast arm. [Note: four 1-1/2 in. x 60 in. anchor bolts].
1	EA	814	12 in., one-way, three section (R,Y,G) adjustable traffic signal head with mast arm mounting hardware and tunnel visors.
1	EA	814	12 in., one-way, five section (R,Y,YA,G,GA) adjustable traffic signal head with mast arm mounting hardware and tunnel visors.
1	EA	814	12 in./8 in., one-way, five section (12 in. YA, GA/ 8 in. R,Y,G) adjustable traffic signal head with mast arm mounting hardware and tunnel visors.
3	EA	814	12 in., one-way, four section (R,Y,G,GA) adjustable traffic signal head with mast arm mounting hardware and tunnel visors.
10.5	SF	813	36 in. x 42 in. R 10-12 sign for mast arm mounting hardware.
7.5	SF	813	30 in. X 36 in. R 3-5(R) sign for mast arm mounting hardware.
7.5	SF	813	30 in. X 36 in. R 3-6 (L) sign for mast arm mounting hardware.
3	EA	810	Micro-loop probe (set of 3 with 500 ft. lead-in).
3	EA	810	2 channel delayed output loop detector amplifiers with detector harness.

B. Equipment to be furnished and installed by the Contractor.
All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
2	LS	205	Test pit excavation.
6	CY	811	Handhole.
740	EA	815	Sawcut for signal loop detector.
2270	LF	810	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
2490	LF	810	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
285	LF	810	2-conductor electrical tray cable (No. 12 A.W.G.).
50	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
1065	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
430	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
70	LF	805	1 in. liquid tight flexible non-metallic conduit for loop detector sleeve.
335	LF	805	2 in. polyvinyl chloride [Schedule 40] electrical conduit - trenched.
110	LF	805	2 in. polyvinyl chloride [Schedule 80] electrical conduit - pushed
150	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched during construction.
3.5	CY	801	Concrete foundation for traffic signal equipment.
1	EA	804	Ground rod - 3/4 in. diameter x 10 ft. length.
6	EA	810	Loop detector splice.
1	EA	553	Thermoplastic pavement marking symbol - white "Left/Thru Arrow".
100	LF	553	24 in. wide thermoplastic pavement marking - white for stop line.
LS	LS	---	Removal and salvage of existing traffic signal equipment.
LS	LS	---	As-built for S.H.A.

C. Existing equipment to be removed by the Contractor and delivered to the MDSHA Office of Traffic and Safety, Traffic Operations Division, Traffic Signal Shop, 7491 Connelley Drive, Hanover MD, 21076. A twenty-four (24) hour notice is required prior to delivery. Please contact Mr. Ed Rodenhizer at (410) 787-7650.

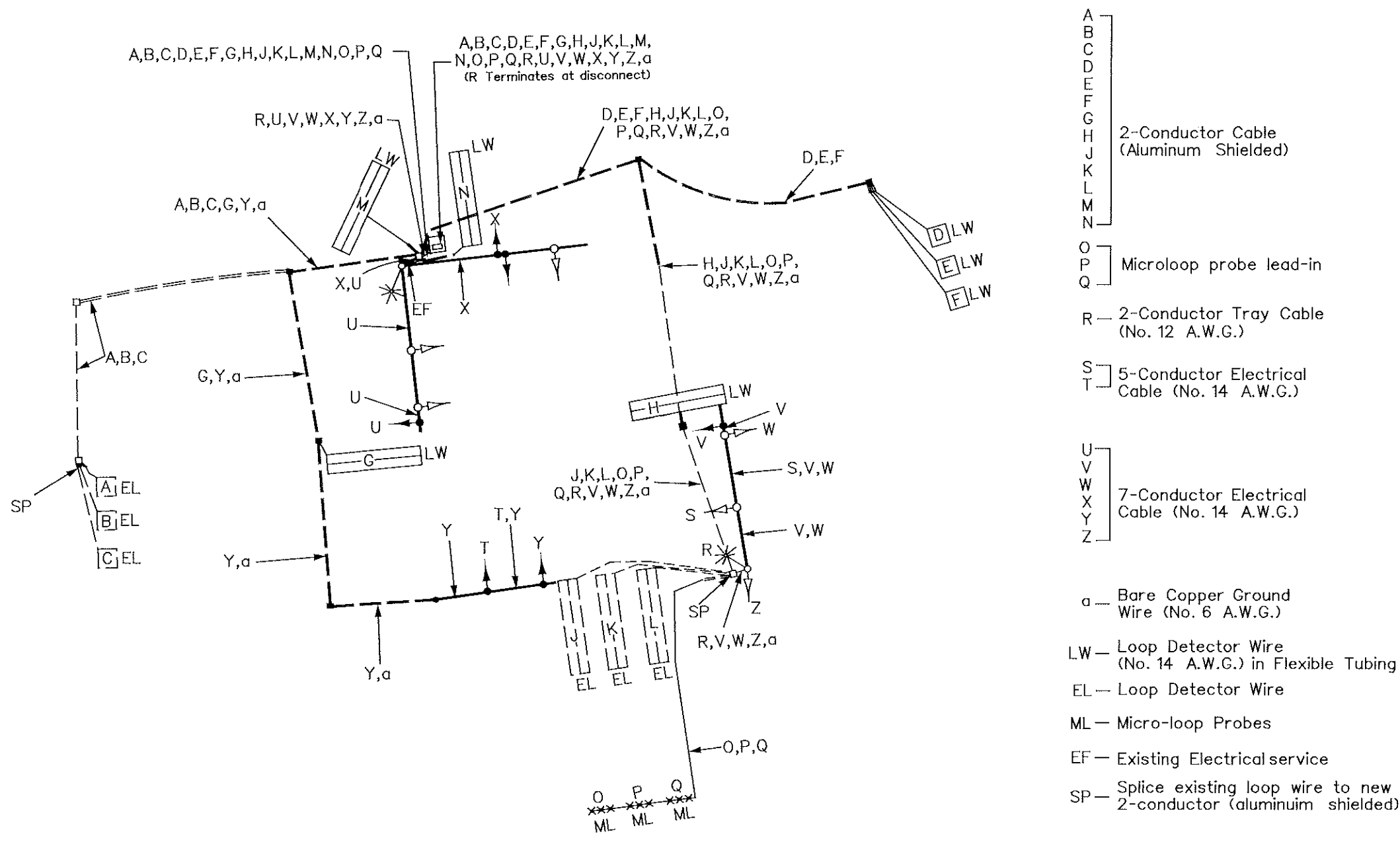
Quantity	Units	Description
2	EA	12 in. 3-section traffic signal head.
1	EA	R 3-5 sign.

Note: All equipment and/or material not listed above shall become the property of the Contractor.

Phase Chart

	1	2	3	4	5	6	7	8	9	10	11	12	
Phase 1 & 5													
1 & 5 Change To Phase 1 & 6 or Phase 2 & 5													
Phase 1 & 6													
1 Change													
Phase 2 & 5													
5 Change													
Phase 2 & 6													
2 & 6 Change													
Phase 3													
3 Change													
Phase 4													
4 Change													
Flashing Operation													

Wiring Diagram



MDOT – STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

DRAWN BY: Frank Hoeckel

DES. BY: Frank Hoeckel

CHK. BY:

(General Information)

ALT US 1 and I-695 RAMP "G"

COUNTY: BALTIMORE

LOG MILE * 03A00101.67

DATE: February 8, 1997

F.A.P. NO. N/A

TS/STD. NO.

SHEET NO.

SCALE: N/A

S.H.A. NO. BW959M82

124B-GI

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